

What is claimed is:

1. An apparatus for controlling supplemental heat in a refrigerator or freezer comprising:

a heating unit

a sensor assembly unit;

a control unit that control the switching unit in response to the sensor assembly unit; and

a switching unit that switches the heating unit on and/or off.

2. The apparatus of claim 1, wherein the sensor assembly unit further comprises:

an ambient temperature sensor;

a surface temperature sensor; and

an ambient relative humidity temperature sensor.

3. The apparatus of claim 1, wherein the heating unit generally traverses a sealing surface of the refrigerator or freezer.

4. The apparatus of claim 1, further comprising:

a door;

a door latch assembly; and

a door latch cover assembly.

5. The apparatus of claim 4, wherein the sensor assembly unit is installed within an interior portion of the door latch cover assembly.

6. The apparatus of claim 1, wherein the control unit enacts the switching unit to provide supplemental heat based upon readings from the sensor assembly unit.

7. The apparatus of claim 6, wherein the control unit operates automatically.

8. The apparatus of claim 6, further comprising an electromechanical valve which is opened to activate the supplemental heat supply.

9. The apparatus of claim 6, wherein the supplemental heat comprises:

heat refrigeration gas.

10. The apparatus of claim 6, wherein the switching unit further comprises:

an electrical heater.

11. A method of controlling supplemental heat in a refrigeration or freezer comprising:

(a) reading a first cabinet surface temperature measurement;

(b) reading a first ambient temperature measurement;

(c) reading an ambient relative humidity;

(d) measuring a calculated dew point reading;

(e) making a first determination of whether the cabinet surface temperature measurement is at a first acceptable level relative to the calculated

dew point measurement; and

(f) supplying supplemental heat if the first determination is not at the first acceptable level.

12. The method of claim 11 further comprising:

(g) reading a second cabinet surface temperature measurement;

(h) reading a second ambient temperature measurement;

(i) making a second determination of whether the second cabinet surface temperature measurement is at a second acceptable level relative to the second ambient temperature measurement; and

(j) deactivating the supply of supplemental heat if the second determination is at a second acceptable level.

13. The method of claim 11, further comprising repeating steps (a)-(f) if the first determination is not at the first acceptable level.

14. The method of claim 12, further comprising continually supplying supplemental heat if the second cabinet surface temperature measurement is not equal to the second ambient temperature measurement.

15. A system for controlling supplemental heat in a refrigerator or freezer comprising:

means for reading a first cabinet surface temperature measurement;

means for reading a first ambient temperature measurement;

means for reading an ambient relative humidity;

means for measuring a calculated dew point reading;

means for making a first determination of whether the first cabinet surface temperature measurement is at a first acceptable level relative to the calculated dew point measurement; and

means for supplying supplemental heat if the first determination is not at the first acceptable level.

16. The system of claim 14 further comprising:

means for reading a second cabinet surface temperature measurement;

means for reading a second ambient temperature measurement;

means for making a second determination of whether the second cabinet surface temperature measurement is at a second acceptable level relative to the second ambient temperature measurement; and

means for deactivating the supply of supplement heat if the second determination is at a second acceptable level.

17. The system of claim 14, further comprising:

means for continually supplying heat if the second cabinet surface temperature measurement is not equal to the second ambient temperature measurement.

18. The system of claim 14, wherein the reading means for a first cabinet temperature measurement comprises a surface temperature sensor.

19. The system of claim 14, wherein the reading means for ambient temperature measurement comprises an ambient temperature sensor.

20. The system of claim 14, wherein the reading means for an ambient relative humidity comprises an ambient relative humidity sensor.

21. The system of claim 14, wherein:  
the means for reading a first ambient temperature measurement;  
and  
the means for reading an ambient relative humidity are part of a sensor assembly unit.